

WISCONSIN FOREST MANAGEMENT GUIDELINES

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A large stack of cut logs, showing the circular cross-sections of the wood, piled up in a forest setting. The logs are arranged in a neat, tiered fashion, with the light-colored wood grain visible on the cut surfaces. The background shows a dense forest of evergreen trees under a clear sky.

Chapter 12

TIMBER HARVESTING

CHAPTER 12 — TIMBER HARVESTING

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Timber harvesting involves: 1) cutting trees and moving them to a landing, 2) processing, sorting and loading, and 3) transporting materials.

Integrated Resource Management Considerations

- Special soil conditions and topographic features make some areas of the state more sensitive than others to soil disturbance. Two primary examples of these localized sensitive areas are the red clay soils along Lake Superior, and the steep slopes in the driftless area in southwestern Wisconsin.
- If done incorrectly, harvesting activities can result in sediment, chemical, nutrient, and debris movement into streams, lakes, wetlands, seasonal ponds, and ground water.
- Wetlands are highly productive sites for a variety of ecological functions, as well as for the enhancement of water quality. All forest management operations in or adjacent to wetlands should be planned and conducted in a manner that protects these functions.
- Visual sensitivity levels should be considered in determining the level of effort appropriate to minimize visual impact.
- The silvicultural system needed to regenerate a stand affects the visual impact of the harvest. In general, partial cutting has less impact in more aesthetically sensitive areas. The type of harvest (partial cut versus clearcut) also affects user perception of apparent size.
- The visual impact of a harvest and the timing of adjacent harvests will be affected by 1) the length of time needed to re-establish forest regeneration; and 2) the severity of treatments required to assure survival of the new growth.
- The average life span of a species affects the frequency of regeneration harvests and the time available to complete a harvest. Upon reaching old age, short-lived species tend to lose vigor over a relatively short time period with entire stands suffering disease or insect mortality all at once. Long-lived species tend to lose vigor more slowly, and suffer mortality on an individual tree basis.
- Flexibility, in terms of stocking or density level, varies from species to species. Some (e.g., red pine, white pine, aspen, northern hardwoods and oak) can be maintained at levels above or below normally recommended standards without substantial losses in quality or increased mortality. Others (e.g., jack pine, white birch, hemlock, balsam fir and spruce) must be kept very near recommended levels, or insect and disease susceptibility are substantially increased.
- In some cases, a deviation from normal management practices, even if silviculturally sound, may not be feasible due to potential insect or disease problems.
- Timber harvesting activities can impact cultural resources if not identified and protected.
- Wildlife habitat quality is influenced by timber harvesting activities. Care must be taken to maintain the structural components of the stand (live trees, snags, woody debris, shrubs, and ground cover) that are needed by wildlife.



Figure 12-1: An aerial view of part of the Northern Highland-American Legion State Forest where aesthetic management guidelines have been applied for many years to manage the visual impact of harvesting operations.

PLANNING AND DESIGN CONSIDERATIONS

- A comprehensive, detailed plan is a critical part of any successful harvesting operation. In addition to what, where and how, the plan should consider follow-up regeneration needs and specific measures designed to address other important forest resources.

Soil Productivity

- Identify areas with special soil conditions and topographic features that make them more sensitive to disturbance than others, and design operations accordingly to minimize any adverse impacts.
- Minimize soil impacts by limiting the soil area impacted by infrastructure (roads, landings and primary skid trails) and by careful consideration of timing, equipment being used, and harvesting methods. Planning considerations should include careful determination of appropriate operating seasons for any given soil, as well as using harvest layouts, strategies, and equipment that minimize the surface area of a site that is trafficked. As a general rule, 15 percent or less of the harvest area should be devoted to haul roads, skid trails and landings.
- Employ appropriate timber harvesting strategies and practices to ensure that harvest operations do not reduce the productive capacity of forest soils through removal of nutrients or disruptions of nutrient cycles.

Water Quality and Wetlands

- Consider water quality concerns as harvest plans are developed:
 - Include provisions for water protection in the timber sale contract.
 - Avoid building landings, skid trails and roads in wetlands.

See Chapter 5: Riparian Areas and Wetlands and Chapter 11: Forest Roads, for general BMPs related to wetlands and planning.

BMP: Planning and Design

- ✓ Limit the length and number of skid trails, and the number of landings and stream crossings, to the minimum necessary to conduct the harvest operation and meet the landowners objectives.

Visual Quality

Wisconsin forests are composed of a wide variety of species. Some occur as pure stands, while others occur in association with each other in complex communities. Each species has a unique set of silvical characteristics, which result in different silvicultural requirements (see Chapter 2: Generally Accepted Silvicultural Principles). As a result of these differences, each species presents a different aesthetic management challenge. In order to most effectively reduce the visual impact of harvesting, it is necessary to carefully evaluate the specific biological requirements of each species as well as the physical and structural characteristics of the stands in which they occur. Elements that can be used to minimize or enhance visual impact must be identified and imaginatively employed. At the same time, alternative management strategies must be devised to overcome less favorable elements.

- When stands contain mixtures of short- and long-lived species, careful consideration should be given to the opportunities available to mitigate the visual impact of a harvest operation through retention of some portion of the long-lived species as individual trees or in scattered clumps.

SHORT-LIVED SPECIES	MEDIUM-LIVED SPECIES	LONG-LIVED SPECIES
Aspen Balsam fir Jack pine Paper birch	Hickory Red maple Tamarack	Ash Basswood Beech Cedar Elm Hemlock Oak Red pine Spruce Sugar maple White pine Yellow birch



Figure 12-2: In visually sensitive areas, thought should be given to retaining selected long-lived trees until the new stand is fully developed.



Figure 12-3: In this jack pine clearcut, long-lived red pine trees were left in both clumps and as scattered individuals to minimize the visual impact of this harvest along a major recreational highway.



Figure 12-4: Residual trees were left in this clearcut as both "islands" and "fingers" to provide better wildlife cover and travel corridors.

- Tree selection criteria and residual density levels can be modified in more visually sensitive portions of a

particular stand to foster a more natural appearance and/or enhance visual diversity.

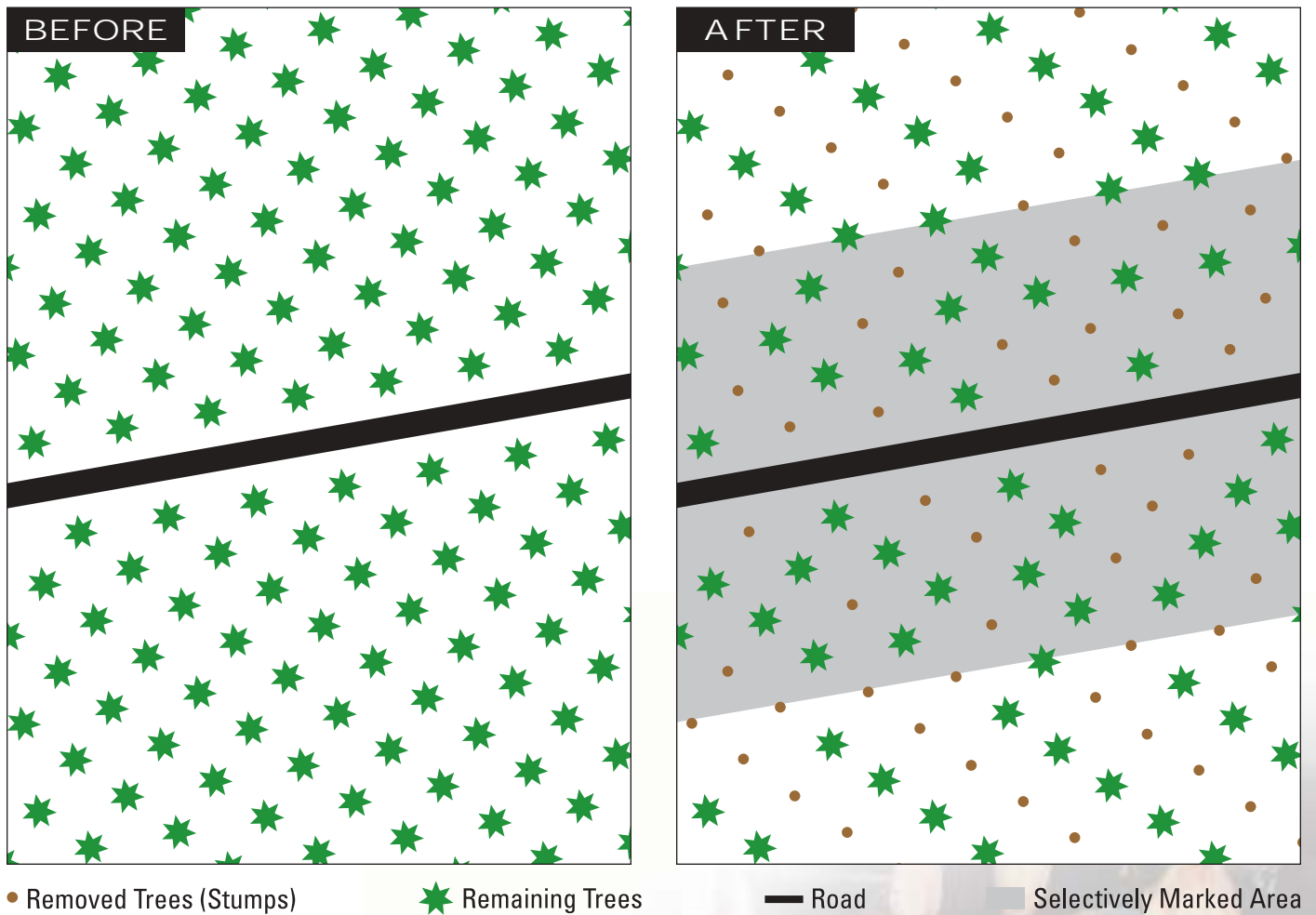


Figure 12-5: When plantations are established with the rows perpendicular to primary roadways, the appearance can be somewhat artificial. The first thinning in such plantations normally requires the removal of entire rows in order to allow harvesting machinery room to gain access, which creates an even more unnatural appearance. In this example, an area along the roadway was selectively thinned to create a more natural appearance. Harvesting entire rows in the remainder of the stand will make it possible to selectively thin the entire stand in subsequent thinnings.

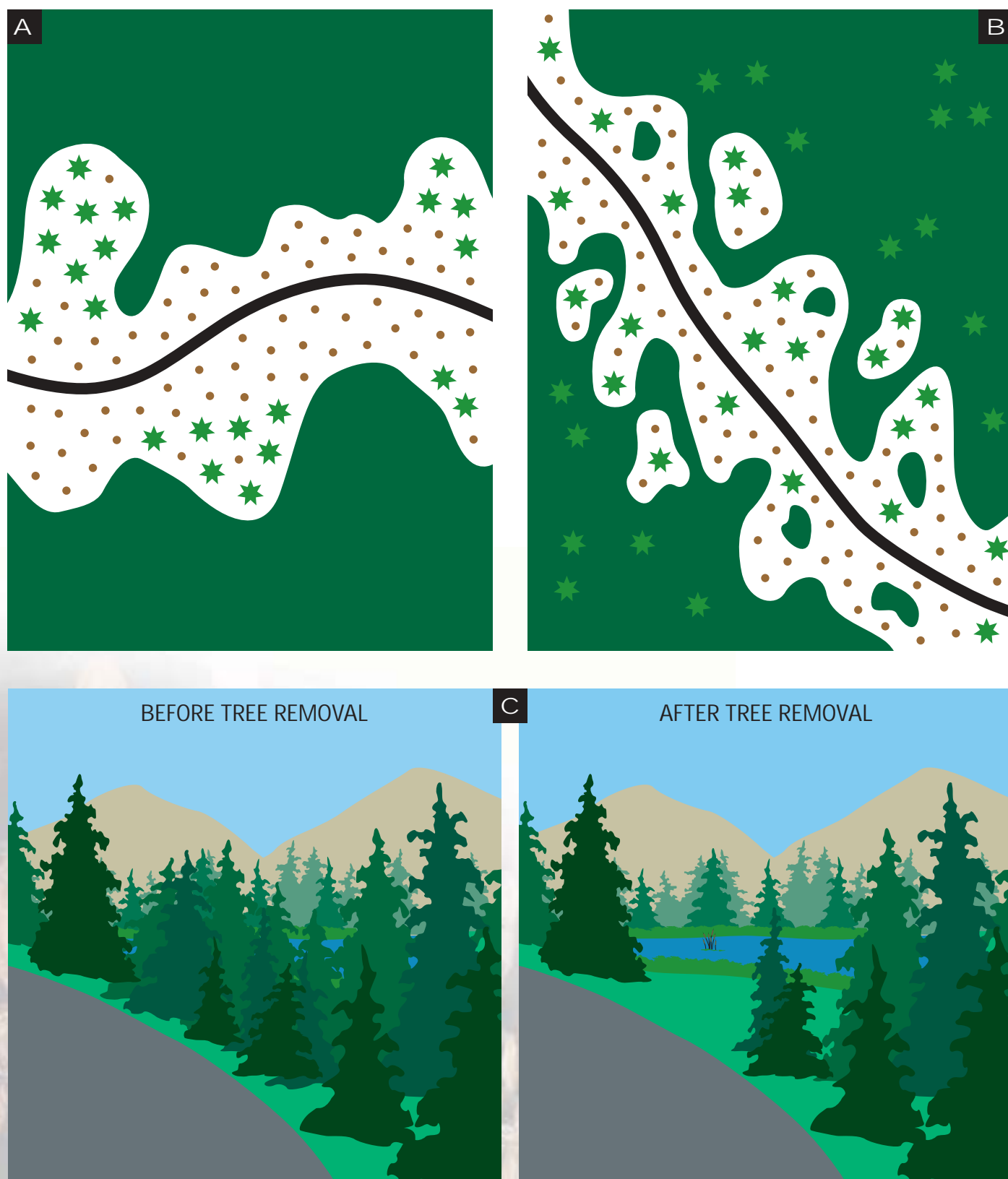


Figure 12-6: In the first of these examples, clumps of long-lived trees were retained along the roadside (A). In the second, individual trees were retained (B). In the third, a small vista was created through the judicious removal of selected trees (C). All of these treatments enhance visual diversity.

- As a stand of trees grows, it passes through a number of stages in its life cycle. Each of these stages presents differing degrees of aesthetic management value and flexibility. Harvesting strategies should reflect the positives and negatives of each.



Figure 12-8

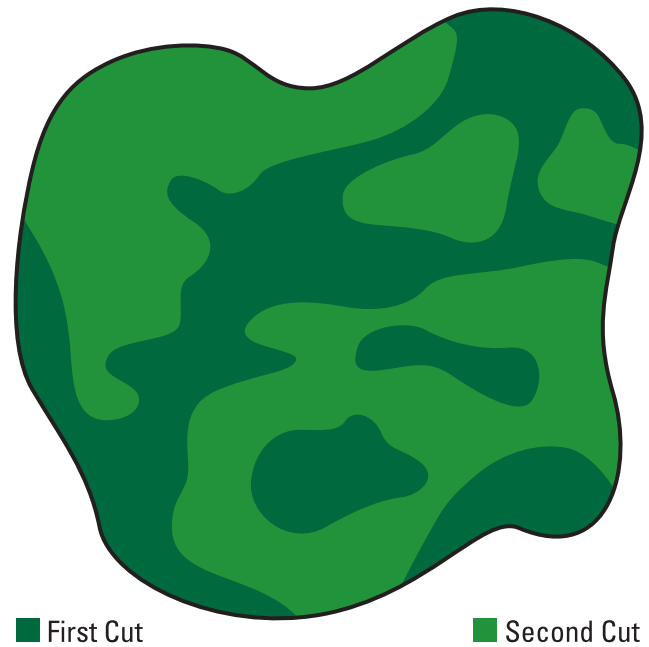


Figure 12-7: This stand of mature timber has been divided into two harvest areas to allow as much time as possible between harvests. Shape was used to reduce the visual impact. If this stand were younger, smaller blocks could be harvested separately over a longer period with a still greater reduction in visual impact.



Figure 12-9



Figure 12-10

Figures 12-8, 12-9 and 12-10: These aerial and ground photographs show a mosaic of stands with different species, age classes, densities and shapes. They were developed over many years to reduce the visual impact of future harvest operations in what was once a large monotype.

- The entire vegetative community occurring in a stand should be considered in the development of an aesthetic management plan – not just that portion being harvested. A well-developed understory can be used to great advantage in reducing the visual impact of a harvest operation.
- Use topography and other land features when possible to minimize the visual impact of harvest operations.



Figure 12-11: This even-aged, short-lived white birch stand occurs in a visual zone classified as “most sensitive.” Creative integration of the understory and topography into the harvest design would be crucial for protecting visual quality during a timber sale. Seasonal harvesting restrictions, logging methods, road systems, slash treatment, and follow-up site preparation are also important considerations that could have an effect on visual objectives.

- Use natural features and avoid artificial patterns where possible. These natural features may correspond to changes in topography, soils, wetland interfaces, and timber types.
- Use shape to address viewing duration and intensity when designing harvest boundaries in areas of high visual sensitivity.



Figures 12-12: Stream corridors provide excellent opportunities for both visual screening and the protection of riparian areas. When used as a sale boundary, the need for stream crossings is also reduced.

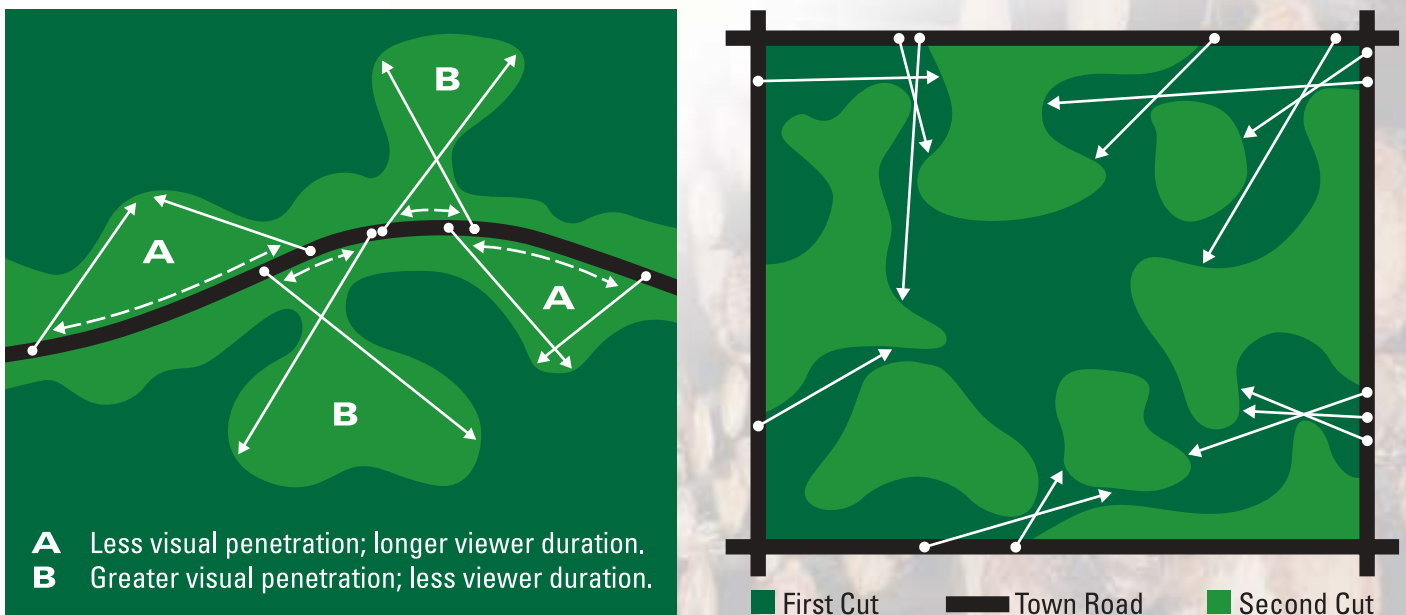


Figure 12-13 In these examples, the harvest area has been designed so that the longer a viewer can see an area (viewing duration), the shorter the distance they can see (visual penetration). The goal is to provide some visual diversity, while at the same time reducing the apparent size of the harvest area.

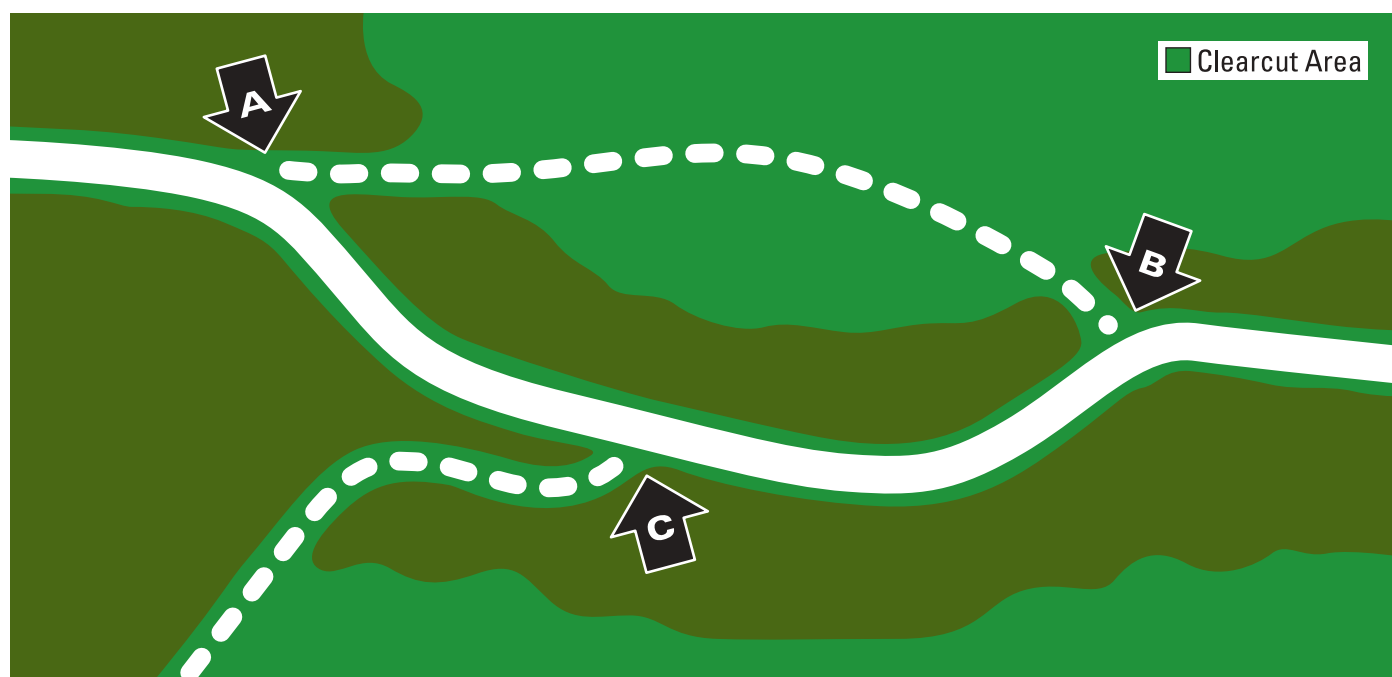


Figure 12-14: The logging road entrances at “A” and “B” permit excessive visual penetration directly into the harvest area. They also present a safety hazard by joining the main road on curves. A more preferred entrance location at “C” breaks the line of sight into the harvest area and also exits onto the main road at a 90° angle in a safe area.

- Road layouts should consider visual quality as well as timber management needs. A good road system should:
 - Minimize the number of exits onto sensitive roadways.
 - Facilitate re-entry of deferred harvest areas.
 - Be compatible with follow-up management operations (firebreak needs, tree planting, timber stand improvement, etc.).

Cultural Resources

- If practical and feasible, protect cultural resource areas by:
 - Excluding cultural resource areas from the timber sale area.
 - Keeping roads, skid trails and landings away from cultural resource areas.

Slash Management and Landings

- Slash is unavoidable when harvesting timber. Slash management plans should be developed prior to beginning the harvest, and also spelled out in the harvesting contract.
- Slash treatment has a definite cost.
- Slash near streams, lakes and wetlands is subject to special regulation.
- Slash provides soil nutrients.
- Slash can provide shelter for wildlife.
- The size and number of landings are affected by silvicultural considerations, the logging system used, sale size, and timber sale design.
- Topography can limit both the placement and number of landings.
- Proximity of harvest to sensitive travel routes or use areas can affect placement of landings.
- Proposed use of a landing area (e.g., as a parking area along a recreational trail or as a wildlife opening) can affect the size and placement of a landing.



Figure 12-15: In this jack pine clearcut, residual trees were left in both clumps and as scattered individuals to maintain good wildlife habitat and reduce the visual impact of the harvest.

Leave (Reserve) Trees, Coarse Woody Debris, and Snags

- Consider leaving individual trees and/or groups of trees unharvested for reasons other than providing seed for regeneration of the stand. Such reasons may include:
 - Provision of den and nest trees, food sources, cover, travel corridors, and special habitat needs for wildlife.
 - Reduce the unobstructed line of vision in clearcut areas, and provide any additional diversity in future stands.
 - Retain selected high quality trees for additional growth and future harvest.
 - Reduce runoff and erosion in sensitive areas.
- Potential problems that need consideration relative to retaining leave or reserve trees include:
 - Susceptibility to windthrow on wet soils, or for shallow rooted species.
 - Potential for damage during harvesting operations.
 - Increased potential for epicormic branching.
 - The shade from reserve trees could retard growth of reproduction underneath them.
 - Damage could occur to the new stand if reserve trees were harvested mid-rotation.
- Consider the need to retain coarse woody debris for wildlife habitat purposes (see Chapter 3: Wildlife Habitat for more information).
- Snags can enhance the quality of wildlife habitats by providing nesting, denning, feeding and roosting sites as well as escape areas, but a potential safety hazard for logging operations must be considered.

OPERATIONAL CONSIDERATIONS

- Conduct on-site meetings with the logger, landowner and resource manager prior to moving equipment onto a site. Such meetings can help assure common understanding of landowner objectives, timber harvest specifications and site conditions.

Protecting Soil Productivity

- Identify soil or site conditions that may dictate specific timing, harvest methods or equipment to be used, or that may lead to weather-related or seasonal closure of the operation.

Protecting Water Quality and Wetlands

- Minimize the crossing of intermittent or perennial streams and open water wetlands. On both upland and lowland sites, install bridges, culverts, snow or ice bridges, fords, or other means, if necessary, to prevent repeated soil and streambank disturbance where no practical alternative exists to crossing a stream.

IMPORTANT: Such activity may require a permit from the DNR.

- Approach water crossings at or near right angles to the stream direction, and use measures to minimize streambank disturbances.
- Incorporate water diversion devices where needed during timber harvesting activity. Divert surface flow before it enters landings or a water body. Incorporate water diversion devices during construction rather than as a remedial activity (see Chapter 11: Forest Roads).
- To prevent repeated rutting deeper than six inches on wetlands, shift harvest operations to a stable portion of the harvest area or alter operating techniques. Alternative techniques include:
 - Employing low ground pressure (LGP) equipment
 - Using slash on skid trails as a driving surface.
 - Minimizing the amount of off-trail equipment operation to reduce the area disturbed by heavy equipment.
 - Waiting for colder weather to freeze the site or enhance freezing of the site by packing snow and ground vegetation with LGP equipment.



Figure 12-16: Conducting on-site meetings with a logger, landowner and resource manager prior to moving any equipment helps ensure a common understanding of contract specifications, timber harvesting regulations, landowner objectives, and site conditions.

BMPs: Protecting Sensitive Areas

- ✓ Avoid operating equipment where excessive soil compaction and rutting may cause erosion that affects water quality. The use of low ground pressure (LGP) equipment may allow operations to continue.
- ✓ Whenever possible, winch logs from steep slopes, if conventional skidding could cause erosion that affects water quality.
- ✓ When harvesting near streams or lakes, follow BMPs for water quality (see Chapter 5: Riparian Areas and Wetlands).
- ✓ Inspect soil-stabilization practices periodically, during and immediately after, harvest operations to insure they are successful and remain functional. Follow BMPs in Chapter 11: Forest Roads, Road Maintenance.
- ✓ For winter harvesting, mark stream channels and existing culvert locations before snowfall.

Protecting Cultural Resources

- If harvesting will take place in the area of a cultural resource, employ measures to reduce soil disturbance, including (but not limited to) hand felling, limited-area feller buncher, low ground pressure (LGP) equipment, cut-to-length systems, and temporary protection such as slash, corduroy, tire mats, or fill over geotextile.

Skid Trails

- Plan progressive harvesting techniques that avoid trafficking over pre-cut areas when possible.

BMPs: Skid Trails

Skid trail restrictions in riparian management zones are described more in detail in Chapter 5: Riparian Areas and Wetlands.

- ✓ Where possible, keep skid trail grades less than 15 percent. Where steep grades are unavoidable, break the grade, install drainage structures, and use soil-stabilization practices (as described in Chapter 11: Forest Roads) where needed to minimize runoff and erosion. Grades greater than 15 percent should not exceed 300 feet in length.
- ✓ Use existing trails if they provide the best long-term access. Consider relocating existing trails if both access and environmental impact can be improved.



Figure 12-17: A skid trail during active harvesting.

BMPs: Stream Crossings for Skidding

- ✓ For skidding across streams, use permanent crossings as described in Chapter 11: Forest Roads, General BMPs for Stream Crossings, or use temporary crossings such as pole and frozen fords.
- ✓ Pole fords may be used in small streams by placing poles (or small logs) side by side on the streambed. Pole fords must be removed immediately after use, or before the upstream end becomes clogged with debris and impedes streamflow (see Figure 12-18).
- ✓ Frozen fords are used in small streams when ice is thick enough, or the streambed is frozen enough, to protect the streambed.

Reminder: Stream crossing permits are required before installing a crossing on any intermittent or perennial navigable stream.



Figure 12-18: Pole ford for a small stream crossing. Pole fords must be removed immediately after use or before the upstream end becomes clogged with debris and impedes streamflow.

Landings

BMPs: Landings

- ✓ Locate landings outside of all riparian management zones.
- ✓ Locate landings on frozen ground or firm, well-drained soils with a slight slope, or on ground shaped to promote efficient drainage. Landings may need a crown shape to allow for drainage.
- ✓ Use existing landings if possible. Close existing landings in riparian management zones unless construction of new landings will cause greater harm to water quality than using existing landings.
- ✓ Locate residue piles (sawdust, field chipping residue, etc.) away from drainages where runoff may wash residue into streams, lakes or wetlands.

REDUCING THE VISUAL IMPACTS OF LANDINGS

- When possible, avoid landings within view of travel routes or recreation areas. If it is not possible to avoid landings within these areas, screen landings from view as long as possible during logging.
- Keep the number of landings to a minimum, and plan them to access future sales.
- Seed, plant and regenerate landings promptly.
- Remove all products promptly when development of visible landings is necessary.
- Dispose of grubbed stumps and trees so they are not visible.
- Treat any slash at landings as soon as possible.
- Remove all trash upon completion of harvesting.

Minimizing Rutting

- Minimize rutting on primary skid trails, roads and landings, and avoid rutting in the general harvest area.
- If alternative operating techniques fail to eliminate rutting, stop harvesting operations.

BMP: Rutting

- ✓ Fill in ruts, apply seed and mulch, and install sediment-control and drainage structures on skid trails and landings where needed to prevent erosion and sedimentation into surfacewaters (see Chapter 11: Forest Roads).

Managing Slash

- Favor practices that allow for dispersed slash on the site, rather than piling slash, where dispersed slash does not conflict with management objectives or reforestation. When piling slash, piles should be kept away from cultural resources.
- If moving slash on-site is desirable, use equipment that minimizes soil disturbance.
- Stump heights should not exceed the diameter of the stump.

REDUCING VISUAL IMPACTS OF SLASH

- Encourage maximum utilization of all felled trees in the harvest area.
- Minimize visual exposure to slash piles and windrows.
- Limit slash not screened from view to a reasonable height to avoid a negative visual effect.

BMP: Slash

- ✓ Do not pile slash in drainage areas where runoff may wash slash into streams, lakes or wetlands.

Snags (Standing Dead Trees)

- Leave as many snags as possible standing in harvest areas, consistent with the exceptions outlined in the next section.

Leave (Reserve) Trees

Two general options are recommended for retaining leave trees (live trees which are left unharvested). Plans for retaining leave trees may utilize one of these options or, when appropriate, they may use the two options in combination.

OPTION 1: CLUMPS, STRIPS OR ISLANDS

- Retain leave trees in clumps, strips or islands in each harvest unit. Benefits of clumping leave trees include:
 - Potential to meet multiple management objectives simultaneously.
 - Visual quality.
 - Equipment maneuverability.
 - Longevity and durability of leave trees.
 - Potential for greater biodiversity within clumps.
 - Easier application in larger harvest units.
 - Breakup of harvest area and reduction in apparent harvest size.
 - Better regeneration of intolerants on the rest of the site.
 - Potential to provide nesting sites for some interior forest species when clumps exceed two acres.
 - Increased animal feeding efficiency and protection from predators.
- Clumps, islands or strips should:
 - Be distributed throughout a harvest unit.
 - Be adjacent to the RMZ for even-aged management.
 - Vary in size, with a minimum of one-quarter acre per clump.
 - Center around or coincide with such features as:
 - 1) Wetland inclusions and seasonal ponds
 - 2) One or more large (greater than 18 inches DBH) active den trees or cavity trees
 - 3) Mast trees
 - 4) Preferred tree species (such as large white pine)
 - 5) Raptor nests or rookeries
 - 6) Sensitive communities or sites
 - Minimal harvesting within clumps is acceptable as long as the integrity of the clump or key leave trees are not disturbed.

OPTION 2: SCATTERED INDIVIDUALS

- As an alternative or supplement to clumps, employ scattered individual leave trees, especially if they are larger, wind-firm specimens of preferred species. Scattered leave trees may be easier to apply to small or narrow harvest units than clumps. Use the following guidelines for scattering individual leave trees:
 - On most clearcut sites where this method is employed, leave six to 12 trees standing per acre, selecting trees preferentially. For preferred characteristics, see Chapter 3: Wildlife Habitat and Appendix A: Wildlife Crop Tree Criteria.
 - On non-clearcut sites, (including selection or partial-cut), be sure that the remaining stand includes a minimum of six cavity trees, potential cavity trees and/or snags per acre.
 - Distribute leave trees throughout the harvested site as much as possible.
- During initial harvest entries of seed-tree or shelterwood cuts, select ultimate leave trees using the following guidelines:
 - Leave a variety of sizes and species of trees, along with the intended seed-/shelter trees, to be retained during the final harvest.
 - Plan for and protect integrity of reserve tree clumps in initial harvest entries.
 - Prevent damage to leave trees in initial and follow-up harvest entries.
- **Exceptions** to the previous leave tree and snag guidelines may be made for a number of reasons:
 - Operator safety (of loggers, aerial spray applicators, and others).
 - Public safety (hazard trees near right-of-way, recreation sites, or airport vicinities).
 - Specific forest management applications (e.g., genetic considerations for seed reproduction systems).
 - Visual quality.
 - Alignment of skid trails.
 - Surrounding landscape concerns (e.g., adjacent sites to Sharp-tailed Grouse management units).
 - Forest insects and diseases (such as dwarf mistletoe on black spruce, gypsy moth or pine bark beetles).
 - Shallow-rooted trees that have little wind resistance.

Providing Coarse Woody Debris

- Avoid having equipment disturb pre-existing large downed logs, stumps and uprooted stumps.
- If a snag must be dropped, leave it where it falls whenever possible.
- Create at least two to five bark-on downed logs greater than 12 inches in diameter per acre, if fewer than this number already exist. In choosing candidates for leave logs, consider the following:
 - Hollow butt sections or other defective lengths of at least six feet are preferred.
 - Sound logs and six- to 12-inch diameter logs may be used if they represent the best available candidates.
 - Hardwood logs have more hollows or cavities, and are favored by certain amphibians.
 - Conifer logs decay more slowly, thus remain present as structure on a site longer than hardwoods.
 - Using pines as downed logs, especially in summer, increases the risk of bark beetle damage to adjacent healthy pines.
- Scatter leave logs across the site, including a few near wetlands.
- **Exceptions** to guidelines for providing coarse woody debris may be made for a number of reasons, including:
 - Alignment of skid trails
 - Specific silvicultural applications (e.g., insect pests)
 - Visual quality issues



Figure 12-19: One harvesting option is to leave six to 12 scattered cavity trees, potential cavity trees, or snags per acre to enhance wildlife habitat.

Managing the Harvesting Process

Even the best harvesting design may fail for lack of vigorous, on-going, contract administration. Harvesting operations may extend over several months, and sometimes years. Problems need to be identified and dealt with early, before they become unmanageable. Efforts to minimize logging damage to the residual stand or to advance regeneration, the lopping and scattering of slash, the clean-up of road entrances, control of erosion, and many other activities need to be done concurrently with the cutting operation if they are to be most effective.

- The creation of “cutting zones” can be used to help administer large harvest areas. In this way, the cutting can be limited to only a specific portion of the harvest area until that “zone” is satisfactorily completed.
- A complete, accurate timber sale map (see Figure 12-20) is an extremely important tool for effective harvest administration. On complex cutting operations, it is absolutely essential. The map should be a part of the timber sale contract, and copies provided to everyone working on the job.

The Timber Sale Contract

A timber sale contract is the most important document involved in the timber harvesting process.

A well-prepared contract, along with a timber sale map, ensures that all parties have a mutual understanding of the operational considerations previously discussed. This section describes and clarifies the Sample Timber Sale Contract included in Appendix B. The Wisconsin Department of Natural Resources, the Wisconsin Woodland Owners Association, and University of Wisconsin-Extension jointly developed it as part of the Forestry Facts series. The sample contract suggests key elements for inclusion in any private timber sale contract whether a landowner uses the one in the appendix or one from another source. The same concepts are also generally present in timber sale contracts on public land.

Five Steps in a Careful and Successful Timber Sale

Landowners are encouraged to hire a professional forester to help with any of these steps. A *Directory of Foresters (Pub-FR-021)* is available from the DNR. Useful information can also be found in the UW-Extension Forestry Fact #75: Hiring a Consulting Forester.

Step 1: Prepare a written forest management plan that addresses your personal objectives and the desired future condition of the woodland. The plan should explain harvesting techniques, and any follow-up work that may be needed to achieve the preferred results.

Step 2: Develop a harvest plan that describes the practices, locations, and expectations for the harvest. This document should include a map of the harvest site.

Step 3: Develop a comprehensive, written timber sale contract* that will be available as part of your timber sale advertisement.

Step 4: Get competitive bids to help secure a fair offer and to find a skilled, careful logger that is experienced with your type of sale.

Step 5: Check references and the performance history of both the consulting forester (if you plan to hire one) and the timber producer you are considering for your timber harvest. The Wisconsin Department of Agriculture and Consumer Protection (DATCP) has a Consumer Protection Hotline at **1-800-422-7128** that you can call to check for past complaints. If the forester you select is expected to scale or grade the cut products, make sure the he/she is qualified to perform the work.

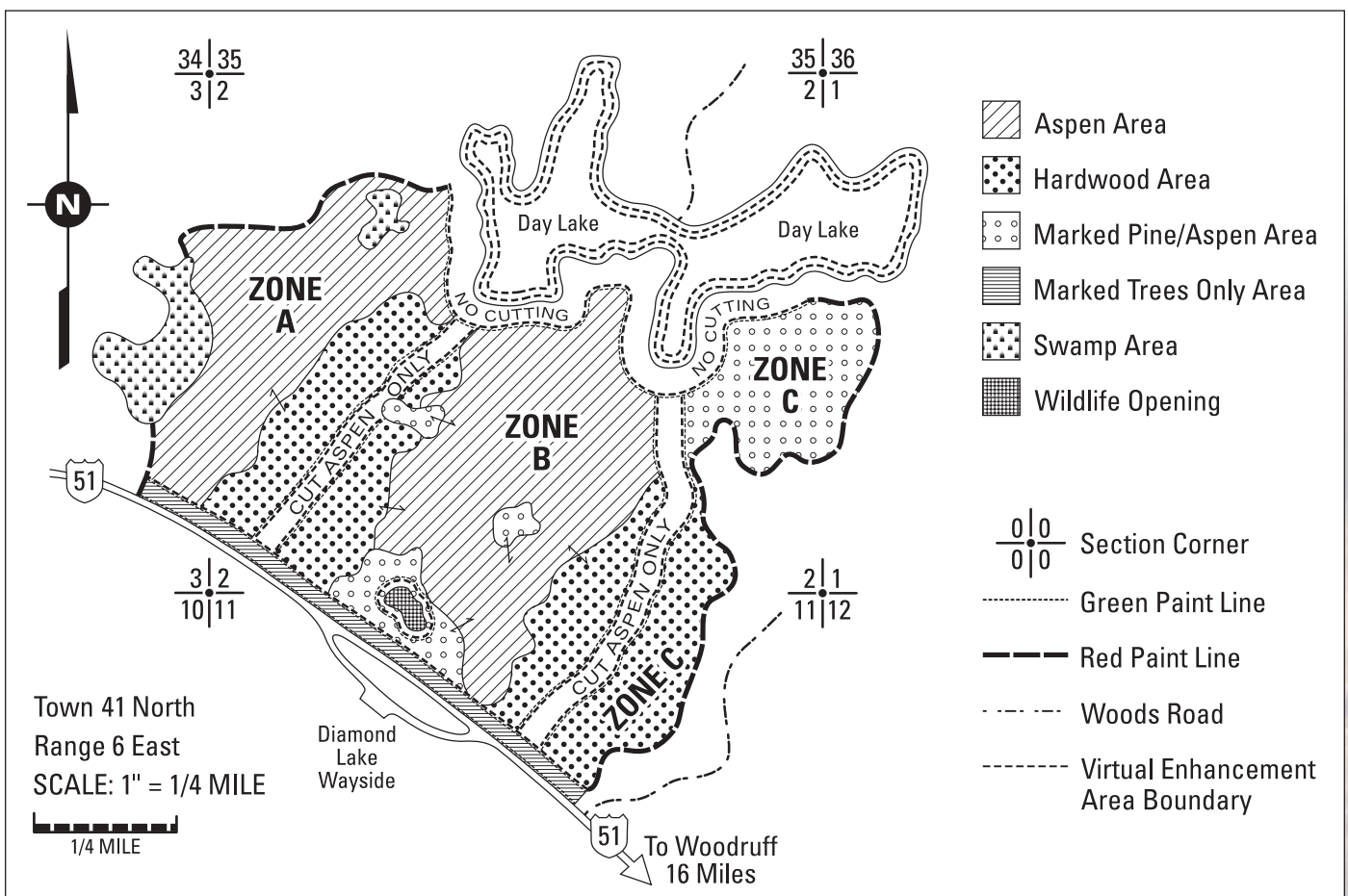


Figure 12-20: A timber sale map should be clear, concise, and contain all the information a logger needs to determine what needs to be done and where. Boundary line locations, other ownerships, paint line colors, cutting specifications, cutting zones (if any), and any other pertinent information, should be completely spelled out.

* A sample timber sale contract may also be downloaded in digital format from the following web site: www.dnr.state.wi.us/org/land/forestry/Private/index.htm

Understanding the Sample Timber Sale Contract

The Sample Timber Sale Contract explained in this section contains a number of options. You will need to select the provisions and language that are appropriate for your harvest. The list of contract provisions is not meant to be exhaustive or necessarily applicable to every situation. You may choose to add or delete (by striking out) provisions. Landowners are encouraged to work with an attorney and professional forester in drafting a timber sale contract. Timber sale contracts usually include provisions that outline who, what, where, when, and how a timber sale will occur. Contracts will also spell out remedies in the event of a dispute. More stringent contracts may result in fewer bidders and, potentially, lower bids. Less restrictive contracts provide for less control. The section titles and provision numbers in the following explanations correspond to the section titles and paragraph numbers in the Sample Timber Sale Contract. Some sections are self-explanatory and not included.

Contract Breach: A Very Serious Decision

Deciding that the Purchaser has breached a timber sale contract should not be made lightly or over trivial matters. Contract breach is a very serious step that can have ramifications for you and the Purchaser well beyond this one event. Reputation is critical to a timber harvester's livelihood and to your ability to sell or resell your timber. You may also be sued – it is that important. Breach should truly be the final straw. Intermediate steps might include visiting with the Purchaser to hash out differences, having a third party intervene, or shutting the sale down temporarily.

What is Reasonable?

Throughout the Sample Timber Sale Contract, there are references to actions being “reasonable.” In legal terms, reasonable means fair, proper, just, moderate, and suitable under the circumstances. The basic question to ask is: Would an outside observer familiar with harvesting practices feel the action was adequate and satisfactory?

If you have never harvested timber before or visited a logging site, it is important that you learn about and understand normal logging practices and their impact. Either visit logging sites or hire a consultant forester to help you determine if your expectations of post-harvest conditions are “reasonable.”

PROVISIONS 1-4

Contract performance, period, extensions, and termination. Beginning and ending dates of the contract are established. The phrase, “For Time is of the Essence,” demands reasonable diligence and completion within the period of the contract. Delays should only be authorized for reasons beyond the control of the Purchaser. This is essential to achieve your management objectives. Some provisions give you the flexibility to protect the land should unanticipated events or conditions occur. The Purchaser's authority to go onto your land and conduct operations is through the contract.

PROVISIONS 5-8

Down payment, bond, remedies and damages. Sellers and Purchasers use down payments as earnest money. Down payments are not performance bonds. Performance bonds assure that costs incurred due to breach can be recovered from the bond, rather than going to court or otherwise recovering costs from the Purchaser. Be aware that many Purchasers may not agree to provide a performance bond unless it is to be held by a consulting forester or an objective third party such as an escrow agent. The Seller's remedies in the event of a breach are not just limited to routine contract damages. Other penalties or remedies may be pursued if the Seller so chooses.

PROVISIONS 9-11

Products to be removed. Specifications for how trees are marked or designated for harvesting are explained (for example, “trees marked with orange paint,” or “all trees within a red marked boundary”). Be certain that your property boundaries are well-defined and understood by the Purchaser. If the boundary has not been formally surveyed, you should meet with the adjoining landowners to agree on the location of the property boundary. The Seller retains sole control over the timber until payment is made. Timber cannot be removed from the property until paid for, or until payment arrangements have been made.

PROVISIONS 12-13

Sale type, scaling, hauling, and payments. There are many ways to sell timber. Each affects the point at which ownership of cut products moves from the Seller to the Purchaser, and who reaps the benefit of product sort and grade. This section defines condition of cut products to be removed from the property, how and by whom the cut products are to be measured, and when the Seller receives payment. Scaling procedures include on-site and mill scale. The Seller should be aware that some mills will send mill slips to the Seller, but others do not. Prior to signing the contract, seek the advice of a tax specialist to determine whether income may be treated as a capital gain or regular income. Spreading the payment over two years may minimize your tax liability in any single year.

PROVISIONS 14-17

Timber products table. The table summarizes the type and volume of timber expected from the harvest, and the price the Purchaser agrees to pay by unit. This information is important in all sales, even lump sum sales, where the price per unit information can be used for damages or contract adjustments, if necessary. In some cases, the term “mixed hardwoods” is used to describe products to be removed. Mixed hardwoods are small quantities of hardwood tree species of low relative value, or are not in sufficient quantity to be marketed in separate species categories. High-value species or products should be identified separately, even if the volume is small. In general, the use of mixed hardwoods should be restricted to pulp.

PROVISIONS 18-28

Utilization and operations. Detail any timber and site protection measures here. Be specific about erosion control, weather, disease and insect prevention, timing, equipment use (e.g., width or size limitations, use of a forwarder or skidder, horses, etc.), operations during hunting seasons, or other constraints you or your foresters consider necessary. Use Wisconsin's Forestry Best Management Practices (BMPs) for Water Quality to protect water resources. If critical BMP needs exist on your property, itemize them. Check and document that the Purchaser and timber operators have completed Wisconsin BMP training. Include any considerations for archeological sites or endangered and threatened species where appropriate or required by law. Be aware that some requirements may affect the price that the Purchaser may offer for the timber.

PROVISIONS 29-31

Notice of intent to cut and compliance with laws.

Specify the party responsible for filing cutting notices and reports with the county clerk and the DNR. Notices must be filed at least thirty days before cutting begins. County cutting notices must be renewed on January 1 of each year. If the land is enrolled in a DNR forest tax law program, the landowner will be responsible for paying a five percent (Managed Forest Law (MFL)) or 10 percent (Forest Crop Law (FCL)) severance tax on the timber cut. Regardless of contract provisions, state statutes hold landowners liable for penalties related to non-compliance with MFL and FCL cutting notice and report laws.

PROVISIONS 32-33

Title, boundary lines and access. These clauses outline three important duties you have as the Seller. First, you assure that you have the authority to sell the timber and will defend that right in court if necessary. A mortgage or land contract may require that the Seller seek permission of creditors before selling. Where there are multiple owners, all should consent. Tax program participants should ensure that the harvest is consistent with the approved forest management plan, and that all required notices are submitted. Second, you will mark the boundary of the timber sale prior to harvest. Third, you will acquire written permission to cross a neighbor's land, if necessary.

PROVISIONS 34-36

Liability and insurance. These provisions protect the Seller from liability arising from the Purchaser's harvesting operation. The Purchaser is required to show proof of workers' compensation and public liability insurance. Be aware that a logger's liability insurance does not normally include damages caused by fire or timber trespass unless purchased as an option.

PROVISION 43

Contact information. This exchange of information between the Purchaser and Seller will ensure that both parties can contact each other easily. If you're using a Seller's agent, provide his/her contact information, too.

POST-OPERATIONAL ACTIVITIES



Figure 12-21: A forwarder offloads pulpwood at a woods landing. Forest management objectives may influence your equipment choice. Forwarders carry wood, thus causing little soil disturbance. Skidders scarify the soil by dragging trees or logs – a plus for natural regeneration where erosion is not a problem.

- Evaluate the harvesting operation, and plan future adaptations at post-harvest conferences with the logger and landowner.
- Plan for removal of equipment and cut material from wetland areas at the end of the winter season prior to thawing.
- Avoid removing soil from the general harvest area to rehabilitate roads, landings and skid trails. Use already-disturbed soil, if needed, rather than disturbing additional soil.
- Inspect and maintain any soil-stabilization practices installed. Rehabilitate landings and skid trails when necessary to mitigate soil compaction and help to reduce erosion.
- Monitor the sale area and access routes for non-native invasive species, and take the necessary steps to eradicate any species that may have been introduced through harvesting activities.
- Evaluate the adequacy of advance regeneration, and/or the need for reforestation.
- Conduct additional site preparation work, as needed, to ensure successful regeneration.